

Final Environmental Assessment for Archery Big Game Hunting at Swan River National Wildlife Refuge

This Environmental Assessment (EA) was prepared to evaluate the effects associated with allowing archery only big game hunting on Swan River National Wildlife Refuge (SRNWR) and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509), Department of the Interior (43 CFR 46; 516 DM 8), and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

Proposed Action:

The U.S. Fish and Wildlife Service (Service) is proposing to allow fall, archery only big game hunting on Swan River NWR, Lake County, Montana. Big game hunting has never been allowed on SRNWR and we propose to allow archery only hunting for white-tailed deer, mule deer, and elk on all 1,960.86 acres owned by the Service during the applicable, State designated fall hunting season. At the request of Montana Fish, Wildlife and Parks' (MT FWP), we have excluded moose from the definition of big game. MT FWP believes that SRNWR offers one of the best opportunities for visitors to view moose in that portion of Lake County and want to carefully balance the needs of non-consumptive wildlife observers with additional opportunities for big game hunters.

In the Draft EA, the Service included hunting black bear on SRNWR along with other big game species. Based on public comment, and in consultation with MT FWP, we have withdrawn that proposal from this Final EA. The final decision on the proposed action will be made at the conclusion of the public comment period for the EA and the draft 2018-2019 Refuge-Specific Hunting and Sport Fishing Regulations. The Service cannot open a refuge to hunting and/or fishing until a final rule has been published in the Federal Register formally opening the refuge to hunting and/or fishing.

Background:

National Wildlife Refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, Federal laws, and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, selected portions of the Code of Federal Regulations and the U.S. Fish and Wildlife Service Manual.

The refuge was established pursuant to the Migratory Bird Conservation Act. The primary purpose of the refuge is for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. Objectives of the refuge are to provide for waterfowl habitat and production and to provide for other migratory bird habitat. The refuge was established May 14, 1973, at the request of Montana Senator Lee Metcalf, who often hunted the area and desired to see it preserved.

The mission of the NWRs, as outlined by the National Wildlife Refuge System Administration Act (NWRsAA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is:

“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

The NWRsAA mandates the Secretary of the Interior in administering the System to:

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRs;
- Ensure that the biological integrity, diversity, and environmental health of the NWRs are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRs described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the NWRs are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRs and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRs through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRs for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

Therefore, it is a priority of the Service to provide for wildlife-dependent recreation opportunities, including hunting and fishing, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the National Wildlife Refuge System.

Currently, Swan River NWR records 525 visitor use days per year. Visitors enjoy a variety of recreational activities related to the six wildlife-dependent recreational uses – hunting, fishing, wildlife observation, photography, interpretation, and environmental education. At present, the refuge is popular for fishing and waterfowl hunting with an estimated 60 and 110 hunt and fish visits annually.

Purpose and Need for the Proposed Action:

The purpose of this proposed action is to provide compatible wildlife dependent recreational opportunities on SRNWR. The need of the proposed action is to meet the Service’s priorities and mandates as outlined by the NWRsAA to “recognize compatible wildlife dependent recreational uses as the priority general use of the NWRs” and “ensure that opportunities are provided within the NWRs for compatible wildlife dependent recreational uses” (16 U.S.C. 668dd(a)(4)).

Alternatives Considered

There are no unresolved conflicts about the proposed action with respect to the alternative uses of available resources, because, after discussion with MT FWP, the Lake County Commission, and Swan Valley Connections, there is general agreement that the proposed action would benefit the local community by expanding current hunting opportunity on the refuge. Therefore, the Service will only compare the proposed action with the no action alternative.

Proposed Action Alternative: Allow Archery Only Big Game Hunting on Swan River NWR.

Pursuant to the Comprehensive Conservation Plan for Benton Lake NWR Complex (Dec. 2012) and the associated Compatibility Determination for hunting evaluated in this document, the refuge proposes to allow archery only big game hunting on Swan River NWR, in accordance with State regulations subject to the following conditions:

1. We would allow archery hunting of elk, white-tailed deer, and mule deer within the boundary of the refuge.
2. We would allow the use of portable blinds and stands, which could be installed no sooner than August 1 and removed by December 15 of each year. Each hunter would be limited to one stand or blind and the hunter must have their name, address, phone number, and automated licensing system number (ALS) visibly marked on the stand. Stands must be placed at least 100 yards from the Tollefson trail located at the south end of the refuge.
3. Game or trail cameras would be prohibited year round.

This alternative offers increased opportunities for public hunting and fulfills the Service's mandate under the National Wildlife Refuge System Act as amended 1997. The Service has determined that this minor modification to the current hunting opportunity is compatible with the purposes of the Swan River NWR and the mission of the NWRS.

No Action Alternative: Continue current levels of public use on Swan River NWR.

Under the no action alternative, big game hunting would not be allowed on Swan River NWR. Waterfowl hunting would continue on lands located north of Bog Road and recreational fishing would be allowed on the Swan River and Service-owned portions of Spring Creek as per State regulation. The refuge would continue to be open to wildlife observation and photography north of Bog Road and on recently acquired lands formerly owned by The Nature Conservancy (Oxbow Preserve) on the southern end of the refuge. Cross-country skiing and snowshoeing would continue to be allowed refuge wide during applicable winter months.

Affected Environment

The Swan River National Wildlife Refuge is located in northwest Montana, 38 miles southeast of the town of Creston, in the serene and picturesque Swan Valley Mountain Range. The 1,960 acre refuge lies within the floodplain of the Swan River above Swan Lake and between the Swan Mountain Range to the east and the Mission Mountain Range to the west. The valley was formed when glacial water poured down the steep slopes of the Mission Range into Flathead Lake. The valley floor is generally flat, but rises steeply to adjacent forested mountain sides. Approximately 80 percent of the refuge lies within this valley flood plain, which is composed of mainly emergent marshes, wet meadows, and riparian forests. Reed canary grass has invaded much of the emergent marsh and wet meadow habitat in recent decades and now dominates a large portion of the marsh. Deciduous and coniferous forests comprise the remaining 20 percent. Swan River, which once meandered through the flood plain, has been forced to the west side of the refuge by past earthquakes and deposits of silt. The result of these geologic events is a series of oxbow sloughs within the refuge flood plain.

For more information regarding the affected environment, please see Chapter 3 of the Benton Lake NWR Complex Comprehensive Conservation Plan (Dec. 2012), which can be found here: <https://www.fws.gov/mountain-prairie/refuges/bnl.php>

Environmental Consequences of the Action

This section analyzes the environmental consequences of the action on each affected resource, including direct and indirect effects. This EA only includes the written analyses of the environmental consequences on a resource when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

The following narrative provides:

1. A brief description of the affected resources in the proposed action area;
2. Impacts of the proposed action and any alternatives on those resources, including direct and indirect effects.

Impact Types:

- *Direct effects* are those which are caused by the action and occur at the same time and place.
- *Indirect effects* are those which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.
- *Cumulative impacts* result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions.

For more information on the environmental consequences of the proposed action, see Chapter 4 of the Benton Lake NWR Complex CCP. Therefore, this EA tiers from this document and provides additional specific analysis of the proposed action.

NATURAL RESOURCES	
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS
<p>Species to Be Hunted</p> <p>Big Game Species (elk, white-tailed deer and mule deer) All have been observed on the refuge, but typically in small numbers; any hunting would be opportunistic if these species happened to be traveling through the refuge.</p> <p>Elk are also a resident big game species regulated by MT FWP. The population is managed as part of State deer and elk management district 132. MT FWP monitors the population annually and sets seasons based on the most current population estimates.</p> <p>White-tailed deer are the most common big game species using Swan River NWR and are abundant in the timbered floodplain along the western and southern portions of the refuge. Mule deer are not as common but occasionally pass through upland portions of the refuge.</p>	<p>Proposed Action: It is anticipated that only 15-30 hunters will take advantage of this opportunity during the season, which will result in additional disturbance and direct mortality to the species being hunted (MT FWP). These impacts are considered to be negligible due to the small number of hunters and the limited number of days per year on which these impacts occur. Additionally, hunter success rates tend to be low for archery hunters. All big game species are regulated by the State based on annual survey data and it is assumed that the State would apply more restrictive regulations if harvest began to impact numbers.</p> <p>Hunting will be allowed refuge-wide during the State open season which is a departure from the current waterfowl hunting program occurring only north of Bog Road. It is possible that archery big game hunters could disturb waterfowl species in areas currently closed to waterfowl hunting but considering that most archery hunters will be in timbered areas of the refuge and using archery equipment as opposed to rifles and shotguns, these impacts are believed to be negligible. Additionally, all tree stands used for archery hunting must be placed a minimum of 100 yards from the Tollefson Trail located at the south end of the refuge.</p> <p>No Action Alternative: Waterfowl would remain the only hunted species on Swan River NWR which would only occur on approximately 40% of the refuge located north of Bog Road. Limited fishing activity would still occur during the State designated season along areas of the Swan River currently closed to waterfowl hunting, and wildlife observation would still occur on the Tollefson Trail located on the south end of the refuge. Present impacts are assumed to be negligible and would not impact hunted species in any discernible manner.</p>
<p>Migratory Waterfowl and Other Birds</p> <p>Over 160 bird species are known to occur in the Swan River watershed with 110 breeding bird species documented.</p> <p>Wetland complexes in the Swan Valley provide important breeding habitat for twenty species of waterfowl including mallard, lesser scaup, wood duck, redhead, ring-necked duck, canvasback, American wigeon, Canada goose, green-winged teal, blue-winged teal, cinnamon</p>	<p>Proposed Action: Archery only big game hunting would occur refuge-wide which may result in temporal disturbance in locations currently closed to public use. Most activity would occur in timbered areas where short term disturbance associated with hunter movement could temporarily displace some forest associated bird species. These impacts would be negligible and it is assumed that displaced bird species would reoccupy disturbed sites following hunter departure. The absence of gun shots and the silent nature of archery hunting would minimize these possible impacts. Access would only occur during the fall hunting season, thus, there</p>

<p>teal, northern shoveler, gadwall, common goldeneye, Barrow's goldeneye, harlequin duck, bufflehead, hooded merganser, common merganser, red-breasted merganser, and ruddy duck.</p>	<p>would be no anticipated impacts to birds during the nesting season when they are most vulnerable to disturbance.</p> <p>No Action Alternative: Similar to no action discussion for hunted species. Present impacts are assumed to be negligible and would not impact hunted species in any discernible manner.</p>
<p>Mammals</p> <p>The Montana Natural Heritage Database documents forty-two species of mammals on record within the Swan Valley. Many of the species documented include S2 Status Species (species at risk because of very limited or potentially declining population numbers, range, or habitat, making it vulnerable to global extinction or extirpation in Montana) such as the grizzly bear and Townsend's bat. Other species include S3 Status Species (species potentially at risk because of limited or declining numbers, range, or habitat, even though it may be abundant in some areas of Montana) such as the wolverine, fisher, hoary bat, fringed myotis, hoary marmot, and Canada lynx, a federally threatened species.</p> <p>Other species documented to occur within the valley include: northern pocket gopher, southern red-backed vole, long-tailed vole, montane vole, heather vole, northern grasshopper mouse, house mouse, Norway rat, northern bog lemming, yellow-bellied marmot, northern flying squirrel, coyote, red fox, striped skunk, long-tailed weasel, mink, badger, raccoon, white-tailed jackrabbit, mountain cottontail, and porcupine (Foresman 2001).</p> <p>A total of sixty-nine species of mammals are known to inhabit the diverse habitats within the Swan Valley. This vast array of species includes large charismatic megafauna such as the grizzly bear, moose, and Canada lynx to species such</p>	<p>Proposed Action: Archery only big game hunting would result in disturbance to mammal species beyond what occurs at present; however, these impacts are assumed to be negligible based on the narrative provided for hunted species and migratory birds above. There could be some temporary displacement but it is assumed that resident and transitory mammals would immediately reoccupy sites where limited disturbance associated with hunting activity had occurred.</p> <p>No Action Alternative: No additional impacts from those described above.</p>

<p>as long-tailed voles and yellow-bellied marmots.</p>	
<p>Amphibians and Reptiles</p> <p>The Montana Natural Heritage Database documents ten species of amphibians and reptiles on record within the Swan Valley. Many of the species documented include S4 Status Species (apparently secure, though it may be quite rare in parts of its range or is suspected to be declining) such as common garter snake, painted turtle, rubber boa, Columbia spotted frog, long-toed salamander, and Rocky Mountain tailed frog. The northern alligator lizard is listed as a S3 Status Species and the western toad is listed as a S2 Status Species. The northern leopard frog is listed as a S1 Status Species (at high risk because of extremely limited or rapidly declining population numbers, range, or habitat, making it highly vulnerable to global extinction or extirpation in Montana). Species not listed in the Natural Heritage Database, but known to occur in the valley include: Pacific tree frog, western skink, eastern racer, gopher snake, terrestrial garter snake, and western rattlesnake. A total of sixteen species of amphibians and reptiles are known to inhabit the diverse habitats within the Swan Valley.</p>	<p>Proposed Action: Archery only big game hunting would occur in timbered floodplain habitat where shallow, seasonal wetlands and moist habitat are located. While hunting would begin on the State designated archery opening of September 1 when reptiles and amphibians would still be active, it is assumed that most would be inactive or in hibernation during the bulk of the open season. Any impacts would be negligible.</p> <p>No Action Alternative: Waterfowl hunting would occur north of Bog Road and limited fishing activity would still occur during the State designated season along areas of the Swan River currently closed to waterfowl hunting. Wildlife observation would still occur on the Tollefson Trail located on the south end of the refuge. Present impacts are assumed to be negligible and would not impact amphibian and reptile species in any discernible manner.</p>
<p>Threatened and Endangered Species and Other Special Status Species</p> <p>Federally listed animal species found in the Swan Valley include the threatened bull trout, grizzly bear, and Canada lynx. The fisher, which is a candidate for listing, also occurs in the watershed (USFWS 2009a).</p> <p>Five rare plant populations and two rare lichens occur on the Swan River NWR. Round-leafed pondweed (<i>Potamogeton obtusifolious</i>) grows in the oxbow and adjacent ponds. Northern bastard toadflax (<i>Geocaulon lividum</i>) inhabits the wet spruce forest. Buchler fern (<i>Dryopteris cristata</i>) is found where carr vegetation</p>	<p>Proposed Action: While there would be no anticipated impacts to bull trout due to archery only big game hunting, there could be some temporary disturbance and or displacement of large carnivore species such as grizzly bears and Canada lynx. While data are limited, there is evidence that grizzly bears use the refuge seasonally and there is at least some concern that increased disturbance could push the bears into adjacent habitat with more roads, potentially increasing the chance for vehicle mortality. Considering that these occurrences are infrequent and archery hunting is minimally disturbing (both noise and visual) these impacts are believed to be negligible and thus, acceptable.</p> <p>Water howellia is an annual plant that germinates and survives in seasonal wetlands. It is unlikely that there would be any direct impacts associated with the proposed action but any minimal impacts associated with hunter movement would be anticipated to be negligible. A Section 7 consultation (Endangered Species Act 1973) was initiated</p>

<p>and spruce forest intermingle. Small yellow lady's slipper (<i>Cypripedium parviflorum</i>) grows on the preserve.</p> <p>Water Howellia (<i>Howellia aquatilis</i>) is thought to be extinct in California and Oregon and is threatened in Washington, Idaho, and Montana. On Swan River NWR, water howellia grows in small vernal pools located in the river floodplain at the south end of the refuge. Water howellia populations fluctuate with changes in the climate and it is estimated that the southern portion of the refuge supports approximately 5,000 plants, due in part to the variable drying regimes found across the refuge.</p>	<p>and hunting was found to result in no effect to perpetuation of the species on the refuge.</p> <p>No Action Alternative: At present, the Tollefson Trail passes through areas occupied by water howellia with no discernible impact to the species. Trail use occurs during the growing season and at a rate far higher than anticipated by big game hunters so no direct or indirect impacts would be anticipated beyond what might occur at present.</p>
<p>Vegetation</p> <p>Swan Valley is a biologically rich coniferous forest ecosystem located between the Bob Marshall and Mission Mountains wilderness complexes. The Swan Valley is unique among Montana's spectacular valleys in that it contains over 4,000 glacially derived wetlands. In fact, approximately 16% of the land in the Swan Valley is considered wetland habitat (lakes, rivers, ponds, marshes, wet meadows, peatlands, and riparian areas). By comparison, the remainder of Montana averages 1% wetland habitat. This fact, along with its diverse forest types, makes the Swan Valley ideal habitat for a diverse array of wildlife. Rare carnivores, threatened trout, and a high diversity of songbirds and waterfowl depend upon the Swan Valley's unique habitats.</p> <p>The Service recently contracted Swan Valley Connections, Condon, Montana, to conduct a baseline vegetation survey for the refuge. While it was previously assumed that moderately invasive species such as reed canarygrass (<i>Phalaris arundinaceae</i>) had become dominant in much of the wetland complex, SVC discovered that several desirable wetland alliances were still extant on the refuge. In total, the study revealed 4 upland, 9</p>	<p>Proposed Action: Negligible impact is expected to vegetation from trampling of hunters, because of the low number of users and days of use expected. While it is possible that hunters could move invasive plant seed from infested areas of the refuge to areas where they currently do not occur it is unlikely that this would become a significant distribution vector. It is unlikely that additional visitation would increase risk.</p> <p>No Action Alternative: Visitor impacts to vegetation would be restricted to wetland areas where waterfowl hunting occurs. Impacts to shoreline habitat along the Swan River associated with fisherman access, and wildlife observation activity along the Tollefson Trail. These impacts are seasonal in nature or restricted to a narrow trail so no significant impacts to native or invasive species would be anticipated.</p>

<p>wetland, and 10 riparian vegetation alliances on the refuge.</p>	
<p>Geology and Soils The Swan River Basin consists of a wide diversity of lakes, riparian areas, rivers, creeks, alpine and subalpine glacial lakes, and springs that feed the basin. The Swan River forged from flows through the mountains, winds across the morainal foothills and through the valleys forming braided delta areas. The river travels over a dense forest floor composed of variously graded porous glacial till and alluvium, averaging 6.2 miles wide at an elevational range of 2,500 to 9,000 feet. Several large lakes (250 to 2,700 acres) occur along the course of the river and its main tributaries. These large lakes within the valley were carved by large alpine glaciers. Hundreds of kettle lakes, fens, bogs, and other lacustrine and palustrine wetlands, with many perched aquifers not directly connected to surface streams, lie scattered across the glacial and alluvial valley floors and foothills.</p>	<p>Proposed Action: While there could be some minor soil compaction associated with the minimal amount of increased hunter activity, the proposed action would be anticipated to have no effect on the geology or soils of the Swan Valley or refuge.</p> <p>No Action Alternative: Current activities would have no effect on the geology or soils of the Swan Valley or refuge.</p>
<p>Floodplains Forested riverine and palustrine wetlands fringe the river channel and dominate the extensive floodplain and relict oxbows interspersed throughout Swan River NWR. The refuge is situated in the Swan River delta as it enters Swan Lake on the north boundary of the refuge. A wide diversity of wetland habitat types exists throughout the delta, which is maintained by a combination of overland flow and shallow groundwater input.</p>	<p>Proposed Action: The proposed action is anticipated to have no effect on refuge floodplains.</p> <p>No Action Alternative: Past infrastructure developed to facilitate meadow hay removal, muskrat farming, and forest access has dramatically altered floodplain hydrology on Swan River NWR. The Service is currently evaluating mechanisms to improve water flow/storage and mimic the hydrologic conditions consistent with floodplain hydrology prior to modification. Current hunting and other public use activities are believed to have no effect on the Swan River delta and associated floodplain.</p>

VISITOR USE AND EXPERIENCE	
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS
Currently, Swan River NWR records approximately 525 visitor use days per year. Visitors enjoy a variety of recreational activities related to the six wildlife-dependent recreational uses – hunting, fishing, wildlife observation, photography, interpretation, and environmental education – that are identified in the Improvement Act as the priority uses. Popular uses include waterfowl hunting, fishing, wildlife observation and photography, and cross country skiing. There are both spatial and temporal differences on when and where these uses occur and at present, there have been no conflicts among the various user groups.	<p>Proposed Action: Various aspects of the proposed hunt program, including temporal and spatial restrictions, combined with the seasonal nature of wildlife dependent recreational activities on the Refuges, would reduce the potential for conflict. While hunting and other wildlife dependent public uses (e.g., wildlife observation and photography) will be available to the public in many of the same areas and times of year, the direct impacts to Refuge visitors engaged in other priority public uses during the hunting season are expected to be minor. The hunting seasons occur when other public uses are at a minimum because they are outside the main tourist season and many of the wildlife species that visitors come to photograph or observe are found in greater abundance in areas outside the hunting area. To ensure safety and minimize conflict between hunters and visitors engaged in wildlife photography or observation, the Refuge will provide information about the hunting program’s boundaries and seasons on the Complex’s website, at Refuge offices, and at parking areas. In addition, law enforcement patrols will be conducted on a regular basis to contact the public and ensure compliance with State, Federal, and Refuge regulations. The Refuge law enforcement staff will also monitor and collect information on the hunt program’s participation and activities to ensure it does not interfere with other wildlife dependent public uses.</p> <p>No Action Alternative: Visitor use is at such low levels that there currently are no conflicts among user groups. Some recreationists would like to see additional opportunities such as furbearer trapping and camping but trapping is incompatible with the Service’ desire to restore natural floodplain hydrology while the Service does not currently have the facilities to accommodate camping. Most of the Swan River is open to recreational trapping while abundant camping opportunities are available on the adjacent Flathead National Forest and the Swan River State Forest.</p>

CULTURAL RESOURCES	
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS
The Service has a trust responsibility to American Indian tribes that includes protection of the tribal sovereignty and preservation of	<p>Proposed Action: Implementation of an archery only big game hunt would have no anticipated effects on cultural resources.</p> <p>No Action Alternative: No impact.</p>

<p>tribal culture and other trust resources.</p> <p>Currently, the Service does not propose any project, activity, or program that will result in changes in the character of, or adversely affect, any historical cultural resource or archaeological site. When such undertakings are considered, the Service takes all necessary steps to comply with section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Service pursues compliance with section 110 of the NHPA to survey, inventory, and evaluate cultural resources.</p>	
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REFUGE MANAGEMENT & OPERATIONS	
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS
<p>Land Use:</p> <p>Swan River NWR is still under development but has a parking area with an interpretive kiosk and boardwalk, a fishing access site capable of supporting drift boats and trailers, a 1.2-mile walking trail at the southern end of the refuge, and several additional parking areas at strategic locations around the refuge boundary. Access to the west side is via a U.S. Forest Service Road, which is very narrow and not designed to handle excessive traffic. The primary launch site for drift boats into the Swan River is also on a FS road and adjacent to an antiquated bridge.</p> <p>The Service is in the process of evaluating methods to minimize past infrastructure impacts to refuge wetlands. As previously stated, infrastructure has been developed for meadow hay removal and muskrat farming which have altered hydrologic characteristics of the Swan River floodplain. We have assembled baseline vegetation data, initiated shallow groundwater monitoring, and obtained LiDAR images to model bathymetry and project vegetation changes anticipated through restored hydrologic function.</p>	<p>Proposed Action: Archery only big game hunting is anticipated to result in an additional 15-30 visitors, which would seasonally result in additional vehicle traffic on refuge access routes and in limited parking areas. If popularity increases or the activity results in numerous visits by each hunter, it could exacerbate road and access point maintenance, particularly on the southern boundary.</p> <p>No Action Alternative: No Impact</p>

<p>This report should be complete by fall 2018 and will provide the basis for future land management decisions such as development or removal of water management infrastructure while paving the way for cooperative farming and/or prescribed fire efforts to restore native habitat.</p>	
<p>Administration</p> <p>Administering the hunting program will annually require staff time from the Refuge managers, Complex biologist, maintenance workers, administrative assistant, and law enforcement officers to coordinate with FWP staff, develop an informational “tear sheet” with regulations, produce news releases, respond to hunter inquiries, conduct hunter and visitor outreach, minimize conflicts among users, conduct law enforcement, maintain boundary posting and parking areas, monitor impacts to wildlife, habitat, and visitor use, and ensure public safety. The annual cost of the Complex’s proposed hunting program is estimated to be \$45,000 (3.5%) of the overall Complex operating budget of \$1,300,000. This cost includes staff and operating expenses for Refuge law enforcement and hunter assistance prior to and during the hunting season. This estimate also includes Refuge staff activities associated with evaluating resources available for hunting (e.g., biological assessment of target species) as well as preparing for (e.g., developing annual “tear sheets,” managing habitat conditions, and special signage and access) and monitoring hunting activities.</p>	<p>Proposed Action: Opening Swan River NWR to archery big game hunting will require additional signage, infrastructure (such as road and parking area development), and other start-up costs. Implementation during the first few years will be done with existing staffing, so it will redirect effort from other high-priority habitat and public use programs.</p> <p>No Action Alternative: The budget identified in the introductory section is adequate to administer the current public use opportunities on the refuge.</p>

<p>SOCIOECONOMICS</p>	
<p>AFFECTED ENVIRONMENT</p>	<p>ANTICIPATED DIRECT AND INDIRECT IMPACTS</p>
<p>Local and regional economies</p> <p>The Swan Valley watershed ownership consists of 286,798 acres of federal (U.S. Forest Service and Service) lands, 45,676 acres of state (Montana Department of Natural Resources) land, 66,066 acres owned by The Nature Conservancy, 12,154 acres owned by Weyerhaeuser, and 51,808 acres of private lands. Most of the middle and high elevation forested</p>	<p>Proposed Action: The proposed action would not have any effect on land ownership or on Swan Valley demographics or employment. The addition of the proposed archery only big game hunt would have the potential to bring an additional 15-30 visitors to the Swan Valley thus increasing the potential for ecotourism profit. It is possible that this visitation, when combined with other opportunities both on and off refuge, that the cumulative effect could result in additional ecotourism jobs.</p>

lands within the watershed are administered by the U.S. Forest Service. Private lands are concentrated in the low elevation portions of the watershed. The local economy is based on a combination of tourism, the timber industry, and government employment (State, Local, and Federal).	No Action Alternative: Current visitation is estimated at 525 visits annually. This provides as yet, unquantified contribution to the local ecotourism economy.
Tourism Industry The Swan Valley economy is largely based on the tourism industry and, as such, a proposed use on Swan River NWR that has the potential to increase visitation would have a positive effect for that segment of the local community.	Proposed Action: The proposed archery only big game hunt would have the potential to bring an additional 15-30 visitors to the Swan Valley thus increasing the potential for ecotourism profit. No Action Alternative: Current visitation is estimated at 525 visits annually. This provides as yet, unquantified contribution to the local ecotourism economy.
ENVIRONMENTAL JUSTICE	
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all Federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.	The Service has not identified any potential high and adverse environmental or human health impacts from this proposed action or any of the alternatives. The Service has identified no minority or low income communities within the impact area. Minority or low income communities will not be disproportionately affected by any impacts from this proposed action or any of the alternatives.
INDIAN TRUST RESOURCES	
There are no Indian Trust Resources on this refuge and this action will not impact any Indian Trust Resources.	

Cumulative Impact Analysis:

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7).

The following is an assessment of cumulative effects associated with the proposed action:

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
<p>Hunting</p> <p>Because the Swan Valley is predominately in State and/or Federal ownership, there are abundant opportunities for outdoor recreation. The State administers the overall hunting program through annual permitting in State Management Unit 132, and through setting seasons and harvest regulations for big game, upland game and waterfowl. There are numerous access points for recreationists to participate in these activities and it is unlikely that there will be a notable increase in hunting/fishing opportunities in the Swan Valley with limited exceptions.</p>	<p>Land Acquisition – The Service is considering acquisition of the 320-acre Cross Ranch, which would be opened to archery big game hunting, fishing, and potentially waterfowl hunting if acquired. There are at least two restorable wetlands on the property (approximately 45 acres), which would provide more management and hunting opportunities for waterfowl.</p>
<p>Other wildlife-dependent recreation (i.e. road and trail development and use)</p> <p>The Service recently acquired a 392-acre tract from The Nature Conservancy, which came with the 1.2-mile Tollefson Trail, which winds through riparian habitat at the southern end of the refuge. This habitat is heavily used by white-tailed deer and is located in an easily accessible area for nature observers and archery hunters.</p>	<p>Seasonally, there could be some overlap between individuals desiring to observe wildlife and archery big game hunters but the timing is such that most wildlife observers are not present during the hunting season. Because it is archery only hunting, overlap impacts would be minimized because there would be no noise associated with the activity. Because the trail is maintained, it is likely that deer would use it as well and it is possible that archery hunters could set their stands near the trail. To mitigate this impact, tree stand must be set back a minimum of 100 yards from the trail.</p>

<p>Development and Population Increase</p> <p>The Swan Valley is very lightly populated and few businesses are located in the largest population centers of Swan Lake (pop. 143) and Condon (pop. 343).</p> <p>There are many seasonal cabins along Swan Lake and the area could potentially build as there is more demand for recreational properties. The Service has established a Conservation Area in the Swan Valley and is authorized to acquire up to 10,000 acres of private conservation easements where new construction would not be allowed.</p>	<p>Archery only big game hunting could draw more visitors to the refuge potentially creating further overlap between competing uses such as wildlife observation and hunting. The Service plans to monitor public use through use of recreational counters at key access points to the refuge. If monitoring data indicates that visitation is increasing, the Service will consider modifying uses to minimize conflict between user groups.</p> <p>Increased visitation would increase revenue brought into the community through ecotourism but could create additional disturbance issues for wildlife and conflict among user groups. The Service Easement program could curtail development and reduce population expansion which would similarly, minimize wildlife disturbance and user group conflict while reducing ecotourism revenue.</p>
<p>Agricultural and other land uses</p> <p>While Swan River NWR once produced meadow hay for livestock use and muskrats for the fur industry, these uses have become minimal in the present day Swan Valley. Timber harvest is the dominant consumptive land use in the Valley and is not anticipated to grow beyond current levels. Acquisition of the refuge and elimination of hay production and muskrat harvest likely resulted in an economic loss to the local community. Additionally, our easement program could impact timber harvest on up to 10,000 acres in the Swan Valley.</p>	<p>Loss of hay and fur revenue is irretrievable but has likely been offset to some extent by ecotourism revenue generated through refuge visitation. Easement acquisition would primarily occur along the river and through portions of the valley where timber harvest is not as desirable. It is unlikely that there would be any loss of timber revenue due to this program.</p>
<p>Use of lead ammunition/tackle</p> <p>There is currently a restriction on lead shot for waterfowl hunting on the refuge but lead can be used for fishing, thus there could be some minimal level of lead sinkers in the Swan River and around the Swan River delta as it enters Swan Lake. All other sources of lead (shot for upland game and big game) have been eliminated.</p>	<p>The proposed action would allow archery only big game hunting which would have no effect on lead accumulation on the refuge.</p>

<p>Climate Change</p> <p>Warming and drying, whether it results from anthropogenic or natural sources, is expected to affect a variety of natural processes and associated resources. However, the complexity of ecological systems means that there is a tremendous amount of uncertainty about the impact climate change will actually have. In particular, the localized effects of climate change are still a matter of much debate. That said, the combination of increased frequency and severity of drought in the Valley and potential to increase wildfire frequency and intensity could dramatically reduce the amount and quality of wildlife habitat in the Valley. As a result wildlife could be forced into smaller and smaller amounts of available habitat. Concentrating wildlife into smaller and smaller areas also has the potential to more readily allow disease to spread within wildlife populations such as cervids (deer and elk) and waterfowl.</p>	<p>There are no reasonable foreseeable impacts associated with climate change and the data are uncertain on the current trend.</p>
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Monitoring

The Service intends to install recreational use counters on major roads entering key access areas on the refuge. Current visitor numbers are unknown but this year's counts will be used as a baseline to compare future levels of visitation.

Summary of Findings and Conclusions:

The purpose of this EA is to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a Finding of No Significant Impact (FONSI). The term "significantly" as used in NEPA requires consideration of both the context of the action and the intensity of effects. This section summarizes the findings and conclusions of the analyses above so that we may determine the significance of the effects.

<u>Affected Environment:</u>	<u>No Action Alternative:</u>	<u>Proposed Action Alternative:</u>
Hunted Species	Negligible, short-term adverse impacts (migratory birds)	Negligible short-term adverse impacts (migratory birds and big game species)
Migratory Waterfowl and other birds	Negligible, short-term adverse impacts (disturbance)	Minor, short-term adverse impacts (disturbance)
Mammals	Negligible, short-term adverse impacts (disturbance)	Minor, short-term adverse impacts (disturbance)
Amphibians and reptiles	Negligible, short-term adverse impacts (displacement during early season)	No Impact
Threatened and Endangered Species	Negligible short-term impact (disturbance, temporary displacement)	Minor, short term impact (disturbance, temporary displacement)
Vegetation	Negligible, short-term impacts (trampling)	Negligible, short-term impacts (trampling)
Geology and Soils	Negligible impact (soil compaction)	Negligible impact (soil compaction)
Floodplains	No Impact	No Impact
Visitor Use and Experience	Negligible, short-term impacts (minimal user group overlap)	Negligible, short-term impacts (user group overlap, new opportunity)
Cultural Resources	No Impact	No Impact
Refuge Management and Operations	Negligible, negative (funding) impacts	Minimal, long-term positive (providing opportunities) and negative (funding) impacts
Socioeconomics	Negligible, long-term positive impacts (economic growth)	Minimal, long-term positive impacts (economic growth)
Environmental Justice	No impact	No impact
Indian Trust Resources	No impact	No impact

No Action Alternative. There would be no additional costs to the Refuge under this alternative. There would be no change to current public use and wildlife management programs on the Refuge under this alternative. The Refuge would not increase its impact on the economy and

would not provide new hunting and access opportunities. This alternative has the least direct impacts of physical and biological resources; however, long-term impacts on habitat quality would be moderately adverse. In addition, it would minimize our mandates under the NWRSA and Secretarial Order 3356.

Proposed Action Alternative. This alternative is the Service's proposed action because it offers the best opportunity for public hunting that would result in a minimal impact on physical and biological resources, while meeting the Service's mandates under the NWRSA and Secretarial Order 3356.

Considering the small number of hunters anticipated (15-30) to participate in archery only big game hunting, impacts to most aspects of the human environment would be negligible to non-existent. To an extent, there could be temporary disturbance and/or displacement effects to some wildlife species and potentially, some additional vegetation trampling but overall, the positive benefit of providing a new recreational opportunity and contribution to ecotourism provides a benefit to the Swan Valley community.

The addition of archery hunting for deer, and elk will not have significant impact on local and regional wildlife populations because the percentage likely to be taken on the Refuge, though possibly additive to existing hunting takes, would be a tiny fraction of the estimated populations. In addition, overall populations will continue to be monitored by MT FWP biologists to determine if harvest levels should be adjusted. Additional hunting would not add more than slightly to the cumulative impacts to resident wildlife stemming from hunting at the local or regional level, and would only result in minor, negative impacts to their populations.

Conclusion. The Service proposes to allow archery only big game hunting opportunities on Swan River National Wildlife Refuge as analyzed above under the Proposed Action Alternative, which will not have any significant impacts on the human environment.

List of Sources, Agencies and Persons Consulted:

Montana Fish Wildlife and Parks (Neil Anderson, Jessy Coltrane)
Lake County Commission
Swan Valley Connections (Luke Lamar, Rebecca Ramsey, Maria Mantas)
Swan Lands Coordinating Committee (various agencies and local community members)

List of Preparers:

Rob Bundy – Refuge Manager – Benton Lake NWR Complex
Nicole Prescott – Fish and Wildlife Officer – Benton Lake NWR Complex

State Coordination:

During acquisition of the Oxbow Preserve we worked with Neil Anderson, MT FWP Assistant Regional Supervisor, to acquire funds from the Migratory Bird Commission. Serving as our State Ex Officio, Neil went to the Commission Meeting where we committed to evaluating the archery only big game hunt on

Swan River NWR. Following successful acquisition, we worked closely with Neil and regional biologist Jessy Coltrane to develop the hunt strategy and to put a proposal before the MT FWP Game Commission to include the new hunt for the FY18/19 hunting season. The Commission approved the hunt on February 15, 2018.

Tribal Consultation:

No tribal consultation was initiated.

Public Outreach:

Pursuant to acquisition of the Oxbow Preserve from The Nature Conservancy, the Service attended a Lake County Commission Meeting and briefed the Lake County Commissioners on the possibility of providing archery only big game hunting. We also attended a meeting of the Swan Lands Coordinating Committee, sponsored by Swan Valley Connections, and publically described our intent. We also plan to release this draft EA for review on the Benton Lake NWR Complex web site for 30 days beginning February 27, 2018. We will solicit public comment and make an electronic copy available for review on-line and have a hard copy available at the Swan Valley Connections office in Condon, Montana, and another available at the Benton Lake NWR Complex Headquarters in Great Falls, Montana.

Determination:

This section will be filled out upon completion of any public comment period and at the time of finalization of the Environmental Assessment.

- ☒ The Service's action will not result in a significant impact on the quality of the human environment. See the attached "**Finding of No Significant Impact**".
- ☐ The Service's action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

Preparer Signature: Rob Bundy Date: 7/23/18

Name/Title/Organization: Rob Bundy, Wildlife Refuge Manager, Benton Lake NWR Complex

Reviewer Signature: Amy Thornburg Date: 7/23/18

Name/Title: Amy Thornburg Deputy Refuge Supervisor

APPENDIX 1

OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS & REGULATIONS

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS	
<p>Cultural Resources</p> <p>American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR Part 7</p> <p>Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3</p> <p>Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa – 470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7</p> <p>National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810</p> <p>Paleontological Resources Protection Act, 16 U.S.C. 470aaa – 470aaa-11</p> <p>Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001-3013; 43 CFR Part 10</p> <p>Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)</p> <p>Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)</p>	
<p>Fish & Wildlife</p> <p>Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22</p> <p>Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450</p> <p>Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m</p> <p>Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904</p> <p>Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21</p> <p>Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)</p>	
<p>Natural Resources</p> <p>Clean Air Act, as amended, 42 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23</p> <p>Wilderness Act, 16 U.S.C. 1131 et seq.</p> <p>Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.</p> <p>Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)</p>	
<p>Water Resources</p> <p>Coastal Zone Management Act of 1972, 16 U.S.C.</p>	

1451 et seq.; 15 CFR Parts 923, 930, 933

Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 U.S.C. 1251 et seq.; 33 CFR Parts 320-330; 40 CFR Parts 110, 112, 116, 117, 230-232, 323, and 328

Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.; 33 CFR Parts 114, 115, 116, 321, 322, and 333

Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141-148

Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)

Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)